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Anne E McCarthy* (mccarthy@math.northwestern.edu), Northwestern University,
Department of Mathematics, 2033 Sheridan Rd, Evanston, IL 60208. *Groups acting by
diffeomorphisms close to the identity.*

Let $\text{Diff}_\epsilon^1(M)$ denote the set of all diffeomorphisms $f : M \rightarrow M$ such that $d_{C^1}(f, id) < \epsilon$. We demonstrate a collection of groups \mathcal{G} with the following property: for each $G \in \mathcal{G}$ and for all manifolds M , there exists $\epsilon > 0$ such that there are no faithful actions $\rho : G \rightarrow \text{Diff}_\epsilon^1(M)$. (Received February 14, 2006)